REMARKS/ARGUMENTS

Claims 1-5, 7, 8, 10-16, 24-27, and 38 are pending. Claims 1-5, 8, 10-16, 24-27, and 38 have been rejected. Claim 38 has been canceled. Applicants maintain the patentability of claim 38, but have canceled claim 38 for the sole purpose of expediting prosecution of the present application. Claims 7 and 10 have been objected to. Claims 7, 10, and 24 have been amended. No new matter has been added.

Claims 24-27 have been rejected under 35 U.S.C. §112, second paragraph, because there was allegedly insufficient antecedent basis for the feature "the series of modulated current pulses." Applicants have amended claim 24 to include "a series of modulated current pulses applied to the magnetic actuator." Also, Applicants have amended claim 24 to include "at least one actuator drive circuit adapted to provide a series of modulated current pulses to the magnetic actuator." Applicants respectfully request reconsideration and withdrawal of the rejection of claims 24-27 under 35 U.S.C. §112.

Claim 38 has been rejected under 35 U.S.C. §102(a) as being anticipated by Yun (U.S. Patent No. 6,175,456). As noted above, claim 38 has been canceled, thereby obviating the rejection of claim 38.

Claims 8, 12, 13, 16, and 24-27 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Barbour (U.S. Patent No. 5,729,119) in view of Lane et al. (U.S. Patent No. 5,452,172) and Yun (U.S. Patent No. 6,175,456). (Yun is not cited in the overview of the rejection, but is cited in the body of the rejection – see, e.g., Office Action, page 4, last four lines). It is respectfully submitted that claims 8, 12, 13, 16, and 24-27 are patentable for the reasons set forth below.

Barbour, Lane et al., and Yun cannot be properly combined because they are not within the scope of the relevant prior art, i.e., they are not analogous. The scope of the prior art is defined by a two-step test which has been stated in the following terms:

> Two criteria have evolved for determining whether prior art is analogous: (1) whether the art is from the same field of endeavor, regardless of the problem addressed, and (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved.

In re Clay, 23 USPQ2d 1058 (Fed. Cir. 1992); *see also In re Dussaud*, 7 USPQ2d 1818 (PTO Bd. Pat. App. & Inter. 1988) (reversing Examiner's rejection based on non-analogous art). Thus, there are two bases for deciding that prior art is analogous for purposes of an obviousness determination. Here, Barbour and Lane et al. broadly relate to the power distribution industry. However, in stark contrast to the power distribution industry, Yun relates to the microelectronics industry within the field of personal computing. The power distribution industry is completely divergent from the microelectronics industry within the field of personal computing. Thus, the prior art is from different fields of endeavor.

The scope of the prior art is also determined by the problem addressed by the Applicants. It is not determined by the claimed invention. Put another way, it is not determined by the solution to the problem which the Applicants have invented. For the invention under consideration, the problem addressed by the Applicants is stated in the specification on page 4, lines 15-23:

> Typically, a controller controls (e.g. opens and closes) the position of magnetic actuator in a power switching device by applying a voltage across the coils in the magnetic actuator. As such, when a certain amount of voltage is applied, the actuator will open or close, thus opening or closing an associated power line. However, such a method of opening and closing a magnetic actuator oftentimes wastes energy and does not provide the ability to control the speed at which the actuators open or close. Therefore, a need exists for power switching control device that efficiently and effectively controls a magnetic actuator in a power switching device.

The problem is one of controlling a magnetic actuator in a power switching device.

The problem addressed by Yun was the amount of write current that should be employed for each of the different magnetic heads and disks of a hard disk drive (column 1, lines 53-55). Thus, Yun does not address the same problem as the claimed invention.

Therefore, Yun is not analogous art that can be used as the basis for a proper obviousness rejection. Accordingly, Applicants respectfully submit that the references are not combinable under 35 U.S.C. §103(a).

Moreover, even if Yun is considered analogous, there is no motivation or suggestion within any of the references to combine Yun (from the personal computing field) with Lane (from the high voltage electrical distribution field) with Barbour (low and medium voltage

breaker field). It is respectfully submitted that the three applied references have been combined, using hindsight, without evidence to support the combination.

Specifically, the Office Action states that it would have been obvious to "include a microprocessor to monitor the modulated current pulses as taught by Yun into Barbour for the purpose of adjusting current to the optimum state without modifying the hardware structure" (see Office Action, pages 4-5). However, not modifying the hardware structure has nothing to do with the present invention. The purpose of the present invention is to provide a power switching control device that efficiently and effectively controls a magnetic actuator in a power switching device. There is no suggestion in Yun – which is prior art from the personal computing field - to combine its teaching with the teaching of Barbour.

Thus, Applicants submit that the claims 8, 12, 13, 16 and 24-27 are patentable for the reasons set forth above. Withdrawal of the rejections of claims 8, 12, 13, 16 and 24-27 under 35 U.S.C. §103(a) is respectfully requested.

Claims 1-5, 11, 14, and 15 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Barbour in view of Delson et al. (U.S. Patent No. 6,147,422). It is respectfully submitted that claims 1-5, 11, 14, and 15 are patentable for the reasons set forth below.

Independent claim 1 contains features that are neither taught nor suggested in the art of record, namely:

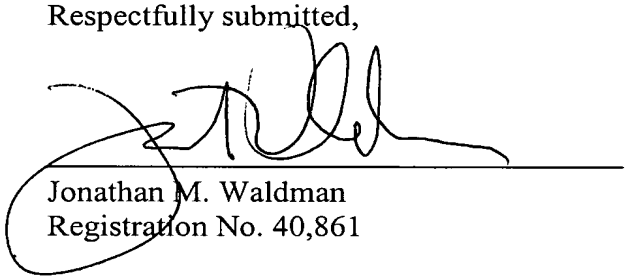
> A method for controlling a magnetic actuator having a coil and an armature within a power switching device, the actuator being connected to a power line in a high voltage electrical distribution system, the method comprising:
>
> inputting a power signal;
>
> applying a first series of modulated current pulses having a first magnitude through the coil of the magnetic actuator connected to the power line in the high voltage electrical distribution system;
>
> modifying the first magnitude of the first series of modulated current pulses; and
>
> applying a second series of modulated current pulses having a second magnitude through the coil of the magnetic actuator connected to the power line in the high voltage electrical distribution system in a first direction such that the actuator moves from a first position to a second position. (emphasis added)

In other words, a first series of modulated current pulses having a first magnitude is applied to the coil of the actuator. The first magnitude of the first series of modulated current pulses is modified, then a second magnitude is applied to the coil of the actuator.

The references, taken alone or in combination, fail to disclose or suggest these features. The Office Action does not address these features of claim 1. If the Examiner maintains the rejection of claim 1 in view of Barbour and Delson, Applicants request identification, by direct reference to the prior art, where these features are shown or suggested in the prior art. Therefore, claim 1 and all claims depending therefrom, including claims 2-5 are patentably distinct from the combination of Barbour and Delson. Furthermore, it is respectfully submitted that claims 11, 14, and 15 are patentable because of, at least, their dependency on patentable claim 8. Applicants respectfully request withdrawal and reconsideration of the rejection of claims 1-5, 11, 14, and 15 under 35 U.S.C. §103(a).

In view of the above amendments and remarks, Applicants respectfully submit that the present application is in condition for allowance. Reconsideration of the application and an early Notice of Allowance are respectfully requested.

Respectfully submitted,



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